PCT

RAW SEQUENCE LISTING　　　　　　　　DATE: 09/21/2004
PATENT APPLICATION: **US/10/507,106**　　TIME: 09:27:01

Input Set : **A:\26352U sequence listing.ST25.txt**
Output Set: **N:\CRF4\09212004\J507106.raw**

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        3 <110> APPLICANT: Japan Science and Technology Agency
        5 <120> TITLE OF INVENTION: Gene participating in the synthesis of brassinosteroid
        7 <130> FILE REFERENCE: 26352U (PS03-311PCT)
C-->    9 <140> CURRENT APPLICATION NUMBER: US/10/507,106
C-->    9 <141> CURRENT FILING DATE: 2004-09-10
        9 <160> NUMBER OF SEQ ID NOS: 6
       11 <170> SOFTWARE: PatentIn version 3.1
       13 <210> SEQ ID NO: 1
       14 <211> LENGTH: 1473
       15 <212> TYPE: DNA
       16 <213> ORGANISM: Arabidopsis thaliana
       18 <400> SEQUENCE: 1
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       21 ttcaacaaga tcaacggtct cagatcatcc ccagcttcaa agaaaaaact taatgatcat     120
       23 catgttacat cccagagtca cggaccaaag tttccacacg gaagcttggg atggcccgtc     180
       25 atcggtgaaa ccatcgagtt cgtctcttct gcttactcag accgtcctga gagtttcatg     240
       27 gacaagcgtc gtctcatgta tgggagagtg tttaagtcgc atatttttgg aacggcgacg     300
       29 atcgtgtcga cggatgctga agtgaacaga gccgttttac agagcgactc gacagctttc     360
       31 gtgccgtttt acccaaaaac ggtaagggag ctaatgggaa aatcgtcgat acttcttatc     420
       33 aacgggagtt tacatagacg gttccatgga ttagtcggtt ctttcttaaa gtcgccactt     480
       35 ctcaaagctc aaatcgttag agacatgcac aagttttgt cggaatccat ggatctatgg     540
       37 tccgaggacc aacctgtgct cctccaagac gtctccaaga ctgttgcatt caaagtactt     600
       39 gccaaggcat tgataagtgt agagaaagga gaagatttag aagagctaaa gagagagttt     660
       41 gaaaatttca tatcaggact catgtcatta ccaattaact tccctggaac gcaactccat     720
       43 agatctctcc aagctaagaa gaatatggtg aagcaagttg aaagaatcat agaaggcaaa     780
       45 attaggaaaa caaagaacaa ggaggaagat gatgttattg caaaggatgt tgtggatgtg     840
       47 ttgcttaagg actcaagtga acatttaact cacaatttga ttgctaacaa tatgatcgac     900
       49 atgatgatcc ctggccacga ttctgtccct gtcctcatta cccttgccgt caaattcctc     960
       51 tctgattctc ctgctgccct caatctccta acgaaaaaca tgaagctgaa aagtttgaag    1020
       53 gaattgacag gagagccact atattggaat gactacttgt cgttaccttt aacacaaaag    1080
       55 gtgattacag agacactgag aatgggaaat gttataattg gagtgatgag aaaggcgatg    1140
       57 aaagatgttg aaataaaagg atatgtgata ccaaaaggat ggtgtttctt ggcctatctc    1200
       59 agatcagttc atcttgatga agcttattat gagtctccgt acaaatttaa tccctggaga    1260
       61 tggcaagaaa gggacatgaa cacgagtagt ttcagtcctt ttggaggtgg tcagagattg    1320
       63 tgccctggtc tcgatttggc tcgtcttgaa acttcagttt ttcttcacca tcttgtcact    1380
       65 cgcttcagat ggatagcaga agaagacaca atcataaact cccaacggt gcatatgaag    1440
       67 aacaaattac ccatttggat caaaagaata taa                                  1473
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       71 <211> LENGTH: 490
       72 <212> TYPE: PRT
       73 <213> ORGANISM: Arabidopsis thaliana
       75 <400> SEQUENCE: 2
       77 Met Asp Thr Ser Ser Ser Leu Leu Phe Phe Ser Phe Phe Phe Phe Ile
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Output Set: N:\CRF4\09212004\J507106.raw

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78 1               5                   10                  15
81 Ile Ile Val Ile Phe Asn Lys Ile Asn Gly Leu Arg Ser Ser Pro Ala
82              20                  25                  30
85 Ser Lys Lys Lys Leu Asn Asp His His Val Thr Ser Gln Ser His Gly
86          35                  40                  45
89 Pro Lys Phe Pro His Gly Ser Leu Gly Trp Pro Val Ile Gly Glu Thr
90      50                  55                  60
93 Ile Glu Phe Val Ser Ser Ala Tyr Ser Asp Arg Pro Glu Ser Phe Met
94 65                  70                  75                  80
97 Asp Lys Arg Arg Leu Met Tyr Gly Arg Val Phe Lys Ser His Ile Phe
98                  85                  90                  95
101 Gly Thr Ala Thr Ile Val Ser Thr Asp Ala Glu Val Asn Arg Ala Val
102             100                 105                 110
105 Leu Gln Ser Asp Ser Thr Ala Phe Val Pro Phe Tyr Pro Lys Thr Val
106          115                 120                 125
109 Arg Glu Leu Met Gly Lys Ser Ser Ile Leu Leu Ile Asn Gly Ser Leu
110      130                 135                 140
113 His Arg Arg Phe His Gly Leu Val Gly Ser Phe Leu Lys Ser Pro Leu
114 145                 150                 155                 160
117 Leu Lys Ala Gln Ile Val Arg Asp Met His Lys Phe Leu Ser Glu Ser
118                 165                 170                 175
121 Met Asp Leu Trp Ser Glu Asp Gln Pro Val Leu Leu Gln Asp Val Ser
122             180                 185                 190
125 Lys Thr Val Ala Phe Lys Val Leu Ala Lys Ala Leu Ile Ser Val Glu
126          195                 200                 205
129 Lys Gly Glu Asp Leu Glu Glu Leu Lys Arg Glu Phe Glu Asn Phe Ile
130      210                 215                 220
133 Ser Gly Leu Met Ser Leu Pro Ile Asn Phe Pro Gly Thr Gln Leu His
134 225                 230                 235                 240
137 Arg Ser Leu Gln Ala Lys Lys Asn Met Val Lys Gln Val Glu Arg Ile
138             245                 250                 255
141 Ile Glu Gly Lys Ile Arg Lys Thr Lys Asn Lys Glu Glu Asp Asp Val
142          260                 265                 270
145 Ile Ala Lys Asp Val Val Asp Val Leu Leu Lys Asp Ser Ser Glu His
146          275                 280                 285
149 Leu Thr His Asn Leu Ile Ala Asn Asn Met Ile Asp Met Met Ile Pro
150      290                 295                 300
153 Gly His Asp Ser Val Pro Val Leu Ile Thr Leu Ala Val Lys Phe Leu
154 305                 310                 315                 320
157 Ser Asp Ser Pro Ala Ala Leu Asn Leu Leu Thr Lys Asn Met Lys Leu
158             325                 330                 335
161 Lys Ser Leu Lys Glu Leu Thr Gly Glu Pro Leu Tyr Trp Asn Asp Tyr
162          340                 345                 350
165 Leu Ser Leu Pro Leu Thr Gln Lys Val Ile Thr Glu Thr Leu Arg Met
166          355                 360                 365
169 Gly Asn Val Ile Ile Gly Val Met Arg Lys Ala Met Lys Asp Val Glu
170      370                 375                 380
173 Ile Lys Gly Tyr Val Ile Pro Lys Gly Trp Cys Phe Leu Ala Tyr Leu
174 385                 390                 395                 400
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RAW SEQUENCE LISTING   DATE: 09/21/2004
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Input Set : A:\26352U sequence listing.ST25.txt
Output Set: N:\CRF4\09212004\J507106.raw

177 Arg Ser Val His Leu Asp Glu Ala Tyr Tyr Glu Ser Pro Tyr Lys Phe
178   405   410   415
181 Asn Pro Trp Arg Trp Gln Glu Arg Asp Met Asn Thr Ser Ser Phe Ser
182   420   425   430
185 Pro Phe Gly Gly Gly Gln Arg Leu Cys Pro Gly Leu Asp Leu Ala Arg
186   435   440   445
189 Leu Glu Thr Ser Val Phe Leu His His Leu Val Thr Arg Phe Arg Trp
190   450   455   460
193 Ile Ala Glu Glu Asp Thr Ile Ile Asn Phe Pro Thr Val His Met Lys
194 465   470   475   480
197 Asn Lys Leu Pro Ile Trp Ile Lys Arg Ile
198   485   490
201 <210> SEQ ID NO: 3
202 <211> LENGTH: 1934
203 <212> TYPE: DNA
204 <213> ORGANISM: Arabidopsis thaliana
206 <220> FEATURE:
207 <221> NAME/KEY: misc_feature
208 <222> LOCATION: (1748)..(1748)
209 <223> OTHER INFORMATION: n means A, C, G or T.
212 <400> SEQUENCE: 3
213 tgtgcttagg catatagtta ttcccaagaa accggtttaa ctgtttacgt atgcaacctc   60
215 cggcaagcgc aggacttttc cggtcgccgg aaaatctccc ttggccttat aattacatgg   120
217 attatttggt cgctggtttc ttggtttttga cggccggaat acttctccgt ccatggctct   180
219 ggtttcgtct acgaaactcg aaaacgaaag atggagatga agaagaagat aatgaggaga   240
221 agaagaaggg aatgattcca aacggaagct taggctggcc ggtgatcgga gaaaccctaa   300
223 acttcatcgc ttgtggttat tcttctcggc ctgttacctt catggacaaa cgaaagtctt   360
225 tatacgggaa agtgttcaaa acgaacataa tagggacacc aatcataata tcaaccgatg   420
227 cagaggtgaa taaagtggtg ctccaaaacc atgggaacac atttgtccct gcatacccta   480
229 aatcaattac ggaactactt ggagaaaact ctattctcag catcaatgga cctcatcaaa   540
231 aaaggcttca cacgctcatt ggcgcgttcc tcagatctcc tcacctcaaa gaccggatca   600
233 ctcgagacat tgaggcctcg gttgttctca ctttggcgtc ttgggctcaa cttccattgg   660
235 ttcatgttca ggatgagatc aaaaagatga cgtttgagat attagtaaaa gtgttgatga   720
237 gcacatctcc tggtgaagat atgaacattc tcaaacttga gttcgaagaa ttcatcaaag   780
239 gtttgatttg tatcccaatc aaattccctg cactagact ctacaaatcc ttaaaggcga   840
241 aagagaggtt aataaagatg gtaaaaaagg ttgtggagga gagacaagtg gcgatgacaa   900
243 cgacgtctcc ggcaaatgac gtggtggacg tacttctaag agacggtggt gattcagaga   960
245 agcaatctca accgtcagat ttcgtcagcg gaaagatcgt agagatgatg atacccggag   1020
247 aggaaacaat gccaacggcg atgaccttgg ctgtcaaatt cttaagtgac aaccccgtcg   1080
249 ctctagccaa actcgtggag gagaatatgg agatgaagag gcgtaaattg gaattgggag   1140
251 aagaatacaa gtggaccgat tatatgtctc tctctttac tcaaaatgtg ataaacgaaa   1200
253 cgcttagaat ggctaacatt attaacgggg tgtggaggaa agctctcaag gatgtagaaa   1260
255 ttaaaggtta cttaataccg aaaggatggt gtgtattggc atcattcata tcggttcaca   1320
257 tggatgaaga catttatgat aatccctatc aattcgatcc gtggagatgg acagaatta   1380
259 atggatcggc aaacagcagt atttgcttca caccctttgg tggtgggcaa aggctatgtc   1440
261 ctggtttaga gctgtcgaag ctcgaaatat ccatctttct tcaccacctt gtaacccggt   1500
263 acagttggac ggctgaggaa gacgagatag tgtcatttcc gactgtgaag atgaagcgga   1560
265 ggctcccgat ccgagtggct actgtagatg atagtgcttc tccgatctca cttgaagatc   1620
267 attaatagat cattttcaaag aacaaaactg tttgtgcaaa gaggaagcag agaagtaaac   1680

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Output Set: N:\CRF4\09212004\J507106.raw

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         269 aaatgatctt attaacaaat agtagagaag agaagcaaac aagattggtg ggtaagacag   1740
W--> 271 aaagaacnaa acgtacagct agtgatggct caaagatgag agattctaat tataattttt   1800
         273 tttgtttgtc atgtcaaatt ataagcgttg gttaggttgt cccttctct tttatttatc     1860
         275 gtaccaaacg caagttgaga tatgattcca tatatatgga tgatagatat gtatattaat   1920
         277 atatagcggc cggg                                                     1934
         280 <210> SEQ ID NO: 4
         281 <211> LENGTH: 524
         282 <212> TYPE: PRT
         283 <213> ORGANISM: Arabidopsis thaliana
         285 <400> SEQUENCE: 4
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         291 Pro Trp Pro Tyr Asn Tyr Met Asp Tyr Leu Val Ala Gly Phe Leu Val
         292              20                  25                  30
         295 Leu Thr Ala Gly Ile Leu Leu Arg Pro Trp Leu Trp Phe Arg Leu Arg
         296          35                  40                  45
         299 Asn Ser Lys Thr Lys Asp Gly Asp Glu Glu Glu Asp Asn Glu Glu Lys
         300      50                  55                  60
         303 Lys Lys Gly Met Ile Pro Asn Gly Ser Leu Gly Trp Pro Val Ile Gly
         304 65                  70                  75                  80
         307 Glu Thr Leu Asn Phe Ile Ala Cys Gly Tyr Ser Ser Arg Pro Val Thr
         308              85                  90                  95
         311 Phe Met Asp Lys Arg Lys Ser Leu Tyr Gly Lys Val Phe Lys Thr Asn
         312              100                 105                 110
         315 Ile Ile Gly Thr Pro Ile Ile Ile Ser Thr Asp Ala Glu Val Asn Lys
         316          115                 120                 125
         319 Val Val Leu Gln Asn His Gly Asn Thr Phe Val Pro Ala Tyr Pro Lys
         320      130                 135                 140
         323 Ser Ile Thr Glu Leu Leu Gly Glu Asn Ser Ile Leu Ser Ile Asn Gly
         324 145                 150                 155                 160
         327 Pro His Gln Lys Arg Leu His Thr Leu Ile Gly Ala Phe Leu Arg Ser
         328          165                 170                 175
         331 Pro His Leu Lys Asp Arg Ile Thr Arg Asp Ile Glu Ala Ser Val Val
         332          180                 185                 190
         335 Leu Thr Leu Ala Ser Trp Ala Gln Leu Pro Leu Val His Val Gln Asp
         336          195                 200                 205
         339 Glu Ile Lys Lys Met Thr Phe Glu Ile Leu Val Lys Val Leu Met Ser
         340      210                 215                 220
         343 Thr Ser Pro Gly Glu Asp Met Asn Ile Leu Lys Leu Glu Phe Glu Glu
         344 225                 230                 235                 240
         347 Phe Ile Lys Gly Leu Ile Cys Ile Pro Ile Lys Phe Pro Gly Thr Arg
         348              245                 250                 255
         351 Leu Tyr Lys Ser Leu Lys Ala Lys Glu Arg Leu Ile Lys Met Val Lys
         352          260                 265                 270
         355 Lys Val Val Glu Glu Arg Gln Val Ala Met Thr Thr Thr Ser Pro Ala
         356          275                 280                 285
         359 Asn Asp Val Val Asp Val Leu Leu Arg Asp Gly Gly Asp Ser Glu Lys
         360      290                 295                 300
         363 Gln Ser Gln Pro Ser Asp Phe Val Ser Gly Lys Ile Val Glu Met Met
```

RAW SEQUENCE LISTING   DATE: 09/21/2004
PATENT APPLICATION: US/10/507,106   TIME: 09:27:01

Input Set : A:\26352U sequence listing.ST25.txt
Output Set: N:\CRF4\09212004\J507106.raw

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364 305                 310              315                 320
367 Ile Pro Gly Glu Glu Thr Met Pro Thr Ala Met Thr Leu Ala Val Lys
368                 325              330              335
371 Phe Leu Ser Asp Asn Pro Val Ala Leu Ala Lys Leu Val Glu Glu Asn
372                 340              345              350
375 Met Glu Met Lys Arg Arg Lys Leu Glu Leu Gly Glu Glu Tyr Lys Trp
376             355              360              365
379 Thr Asp Tyr Met Ser Leu Ser Phe Thr Gln Asn Val Ile Asn Glu Thr
380         370              375              380
383 Leu Arg Met Ala Asn Ile Ile Asn Gly Val Trp Arg Lys Ala Leu Lys
384 385                 390              395                 400
387 Asp Val Glu Ile Lys Gly Tyr Leu Ile Pro Lys Gly Trp Cys Val Leu
388                 405              410              415
391 Ala Ser Phe Ile Ser Val His Met Asp Glu Asp Ile Tyr Asp Asn Pro
392             420              425              430
395 Tyr Gln Phe Asp Pro Trp Arg Trp Asp Arg Ile Asn Gly Ser Ala Asn
396             435              440              445
399 Ser Ser Ile Cys Phe Thr Pro Phe Gly Gly Gly Gln Arg Leu Cys Pro
400         450              455              460
403 Gly Leu Glu Leu Ser Lys Leu Glu Ile Ser Ile Phe Leu His His Leu
404 465                 470              475                 480
407 Val Thr Arg Tyr Ser Trp Thr Ala Glu Glu Asp Glu Ile Val Ser Phe
408             485              490              495
411 Pro Thr Val Lys Met Lys Arg Arg Leu Pro Ile Arg Val Ala Thr Val
412             500              505              510
415 Asp Asp Ser Ala Ser Pro Ile Ser Leu Glu Asp His
416         515              520
419 <210> SEQ ID NO: 5
420 <211> LENGTH: 20
421 <212> TYPE: DNA
422 <213> ORGANISM: Artificial sequence
424 <220> FEATURE:
425 <223> OTHER INFORMATION: PCR amplification primer
427 <400> SEQUENCE: 5
428 gttaaaacac taatggacac                                        20
431 <210> SEQ ID NO: 6
432 <211> LENGTH: 21
433 <212> TYPE: DNA
434 <213> ORGANISM: Artificial sequence
436 <220> FEATURE:
437 <223> OTHER INFORMATION: PCR amplification primer
439 <400> SEQUENCE: 6
440 tgatttatat tcttttgatc c                                      21
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 09/21/2004
PATENT APPLICATION: **US/10/507,106**   TIME: 09:27:02

Input Set : **A:\26352U sequence listing.ST25.txt**
Output Set: **N:\CRF4\09212004\J507106.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 1748

VERIFICATION SUMMARY   DATE: 09/21/2004
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Input Set : **A:\26352U sequence listing.ST25.txt**
Output Set: **N:\CRF4\09212004\J507106.raw**

L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:271 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:1740